Pandemic telehealth flexibilities for buprenorphine treatment: A synthesis of evidence and policy implications for expanding opioid use disorder care in the U.S.

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Supplemental Tables.

Table 1. Complete search strategy for narrative review

Table 2. Summary table of included studies

Table 1. Complete Search Strategy for narrative review

Database	Strategy					
	1	("Buprenorphine" AND ("Telemedicine" [Mesh])				
	("Buprenorphine" OR "Opioid-Related Disorders/drug therapy" [Mesh] OR "Opioid-Related Disorders/therapy" [Mesh] OR "Opioid-Related Disorders/therapy" [Mesh] OR "Opioid-Related Disorders/prevention and control" [Mesh]) AND "Telemedicine" [Mesh]					
	3	("Buprenorphine" OR "Buprenorphine/therapeutic use" [Mesh] OR "Opioid-Related Disorders/drug therapy" [Mesh] OR "Opioid-Related Disorders/therapy" [Mesh] OR "Opiate Substitution Treatment" [MeSH Terms] OR "Opioid-Related Disorders/prevention and control [Mesh]) AND "Telemedicine" [Mesh] AND ("COVID-19" [Mesh] OR "Pandemics" [Mesh] OR "SARS-CoV-2" [Mesh])				
	4	("Buprenorphine" OR "Buprenorphine/therapeutic use"[Mesh] OR "Opioid-Related Disorders/drug therapy"[Mesh] OR "Opioid-Related Disorders/therapy"[Mesh] OR "Opiate Substitution Treatment"[MeSH Terms] OR "Opioid-Related Disorders/prevention and control"[Mesh]) AND ("Telemedicine" [Mesh] OR "audioonly") AND ("COVID-19"[Mesh] OR "Pandemics"[Mesh] OR "SARS-CoV-2" [Mesh])				
PubMed	5	("Buprenorphine" OR "Buprenorphine/therapeutic use" [Mesh] OR "Opioid-Related Disorders/drug therapy" [Mesh] OR "Opioid-Related Disorders/therapy" [Mesh] OR "Opiate Substitution Treatment" [MeSH Terms] OR "Opioid-Related Disorders/prevention and control" [Mesh]) AND ("Telemedicine" [Mesh] OR "audioonly" OR "audio" or "telemedicine" or "telehealth" or "virtual" or "video") AND ("COVID-19" [Mesh] OR "Pandemics" [Mesh] OR "SARS-CoV-2" [Mesh])				
	6	("Buprenorphine" OR "Buprenorphine/therapeutic use"[Mesh] OR "Opioid-Related Disorders/drug therapy"[Mesh] OR "Opioid-Related Disorders/therapy"[Mesh] OR "Opiate Substitution Treatment"[MeSH Terms] OR "Opioid-Related Disorders/prevention and control"[Mesh]) AND ("Telemedicine" [Mesh] OR "audio-only" OR "audio" or "telemedicine" or "telehealth" or "virtual" or "video") AND ("COVID-19"[Mesh] OR "Pandemics"[Mesh] OR "SARS-CoV-2"[Mesh] or "COVID" or "pandemic")				
	7	((("COVID-19"[Mesh] OR "Pandemics"[Mesh] OR "SARS-CoV-2"[Mesh] or COVID or pandemic)) AND (("Telemedicine" [Mesh] OR audio-only OR audio or telemedicine or telehealth or telephone or virtual or video OR online))) AND ((opioid related disorders AND (treatment or therapy)) OR Opiate Substitution Treatment OR Buprenorphine)				
	1	covid-19.mp. or exp COVID-19/				
	2	exp Pandemics/ or exp Severe Acute Respiratory Syndrome/ or sars-cov-2.mp.				
	3	1 or 2				
	4	telemedicine.mp. or exp Telemedicine/				
	5	telehealth.mp.				
		exp Online Therapy/				
	7	(audio-only or audio or telemedicine or telehealth or telephone or virtual or video or online).mp.				
	8	4 or 5 or 6 or 7				
	9	3 and 8				
	10	buprenorphine.mp. or exp Buprenorphine/				
	11	exp Drug Therapy/ or exp Treatment/				
	12	exp "Opioid Use Disorder"/ or "Opioid use disorder".mp.				
	13	11 and 12				
	14	10 or 13				
	15	9 and 14				
	16	9 and 10				
	-	9 and 13				
PsycInfo	18	9 and 12				

Table 2. Summary table of included studies

Author, Year	Study Design	Setting of Care, Location	Study Period (Pre, During, 'Post' Guideline Change)	Sample population	Sample size
Aronowitz, 2021	Qualitative study	Other, Philadelphia, Pennsylvania	July - August 2020	MOUD providers	22
Barsky, 2022	Observational outcomes study	Multi-setting, Multistate	Pre: January 1 - March 30, 2020 During: April 1, 2020 - April 30, 2021	Adults with OUD	3,638
Beetham, 2022	Closed end survey of practices/perceptions	Office-based, Multistate	July 2020	MOUD providers	1,054
Belcher, 2021	Observational outcomes study	Detention Center, Talbot County, MD	August 15, 2020 - February 15, 2021	Adults with OUD in jail, awaiting trial or bail	7
Cance, 2020	Observational outcomes study	Multi-setting, Texas	Pre: December 15, 2019, - March 13, 2020 During: March 14 - June 11, 2020	Adults with OUD	not specified
Castillo, 2020	Observational outcomes study	SSP, Miami, FL	March 30 - June 8, 2020	People who inject drugs	31
Caton, 2021	Closed end survey of practices/perceptions	Office-based, California	April 20 - May 8, 2020	MOUD providers	118
Caulfield, 2021	Qualitative study	Setting of care not specified, New York	March 2020 - July 2021	Adults with OUD	not specified
Cunningham, 2022	Observational outcomes study	Office-based, Bronx, NY	Pre: March - August 2019 During: March - August 2020	Adults with OUD	107

Author, Year	Study Design	Setting of Care, Location	Study Period (Pre, During, 'Post' Guideline Change)	Sample population	Sample size
Frost, 2022	Observational outcomes study	Other, Multistate	March 23, 2020 - March 22, 2021	MOUD providers	17,182
Harris, 2022	Observational outcomes study	Mobile Clinic, Baltimore City, MD	March 16, 2020 - March 15, 2021	Adults with OUD	150
Hughes, 2021	Observational outcomes study	Office-based, North Carolina	Pre: January 16 - March 15, 2020 COVID transition: March 16 – April 15, 2020 During: April 16 - June 15, 2020	Adults with OUD	242
Huskamp, 2020	Observational outcomes study	Multi-setting, Multistate	January - May 2020	Adults with OUD	5,988,307
Huskamp, 2022	Closed end survey of practices/perceptions	Multi-setting, Multistate	November - December 2020	MOUD providers	602
Jones, 2021	Closed end survey of practices/perceptions	Multi-setting, Multistate	June 23 - August 19, 2020	MOUD providers	10,326
Kaur, 2022	Observational outcomes study	Office-based, Pennsylvania	July 1, 2019 - June 30, 2020	Adults with OUD	Varies by time period analyzed: 309, 327, 360,365
Krawczyk, 2021	Qualitative study	Multi-setting (Reddit: r/opiates, r/OpiatesRecovery), Multistate	March 5 - May 13, 2020	Adults with OUD	300 posts
Krawczyk, 2022	Closed end survey of practices/perceptions	Multiple OTPs, Pennsylvania	September - November 2020	Clinical directors of OTPs	47

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Lambdin, 2022a	Observational outcomes study	SSP, California	May 28, 2020 - March 26, 2021	Adults with OUD	114
Lambdin, 2022b	Closed end survey of practices/perceptions	SSP, Multistate	February - June 2021	Syringe service programs	295
Lockard, 2022	Qualitative study	Office-based, Portland, OR	March - April 2021	Adults with OUD	19
Lynch, 2022	Observational outcomes study	Virtual Clinic, Pennsylvania	April 27, 2020 - July 31, 2021	Adults with OUD	200
Mattocks, 2022	Qualitative study	Office-based, Multistate	October 2020 - May 2021	MOUD providers	23
Mehtani, 2021	Observational outcomes study	Virtual clinic, San Francisco, CA	April 10 - May 25, 2020	Adults with OUD	19
Molfenter, 2021	Closed end survey of practices/perceptions	Multi-setting, Multistate	May 15 - August 31, 2020	Organizations providing SUD services	457
Nordeck, 2021	Observational outcomes study	Mobile Clinic, Baltimore City, MD	March 1 - May 31, 2020	Adults with OUD	143
O'Gurek, 2021	Observational outcomes study	Office-based, Philadelphia, Pennsylvania	Pre: January 1 - March 13, 2020 During: March 16 - April 30, 2020	Adults with OUD	852 visits
Rahman, 2021	Observational outcomes study	Office-based, Massachusetts	March 1st - June 15th, 2020	Adults with OUD	75
Saloner, 2022	Closed end survey of practices/perceptions	Multi-setting, Multistate	August 19, 2020 - January 29, 2021	Individuals receiving substance use treatment	316
Samuels, 2022	Observational outcomes study	Multi-setting, Multistate	March - June 2020	Adults with OUD	159

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Sivakumar, 2022	Observational outcomes study	SSP, New Haven, Connecticut	March 15 - June 15, 2020	Adults with OUD	31
Sung, 2022	Closed end survey of practices/perceptions; Qualitative study	Multi-setting, Multistate	July - August 2020	MOUD providers	797
Swann, 2022	Closed end survey of practices/perceptions	Multi-setting, Multistate	November 11 - December 23, 2020	Local health departments	214
Textor, 2022	Qualitative study	Other & multi-setting, Multistate	May 2020 - May 2021	Adults with OUD; MOUD providers; pharmacists	24 providers and clinical staff; 10 pharmacists; 19 patients
Tilhou, 2022	Observational outcomes study	OTP & Office-based, Wisconsin	Pre-PHE: December 1, 2018 - March 15, 2020 Early-PHE: March 16 - May 15, 2020 Later-PHE: May 16 - September 30, 2020 [PHE=public health emergency]	Adults with OUD	6,453
Tofighi, 2022	Observational outcomes study	Virtual Clinic, New York City	March 2020 - March 2021	Adults with OUD	99
Treitler, 2022	Qualitative study	OTP & Office-based, New Jersey	September - November 2020	MOUD providers	20
Uscher-Pines, 2020	Qualitative study	Other, Multistate	April 15 - April 24, 2020	MOUD providers	18
Walters, 2022	Qualitative study	Multi-setting, Northeast	June - October 2020	Adults ≥ 18 who use/used drugs currently, previously	13 were currently on buprenorphine, 3 were previously on

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				or never engaged in buprenorphine treatment; MOUD providers, clinic staff, or work at a regulatory agency	buprenorphine, 6 had never been on MOUD; 8 buprenorphine providers
Ward, 2022	Observational outcomes study	Office-based, Philadelphia, Pennsylvania	Pre: September 1, 2018 - March 12, 2020 During: March 13 - December 2020	Adults with OUD	506
Wunsch, 2022	Observational outcomes study	Virtual Clinic, Rhode Island	April 2020 - February 2021	Adults with OUD	134